

Pons

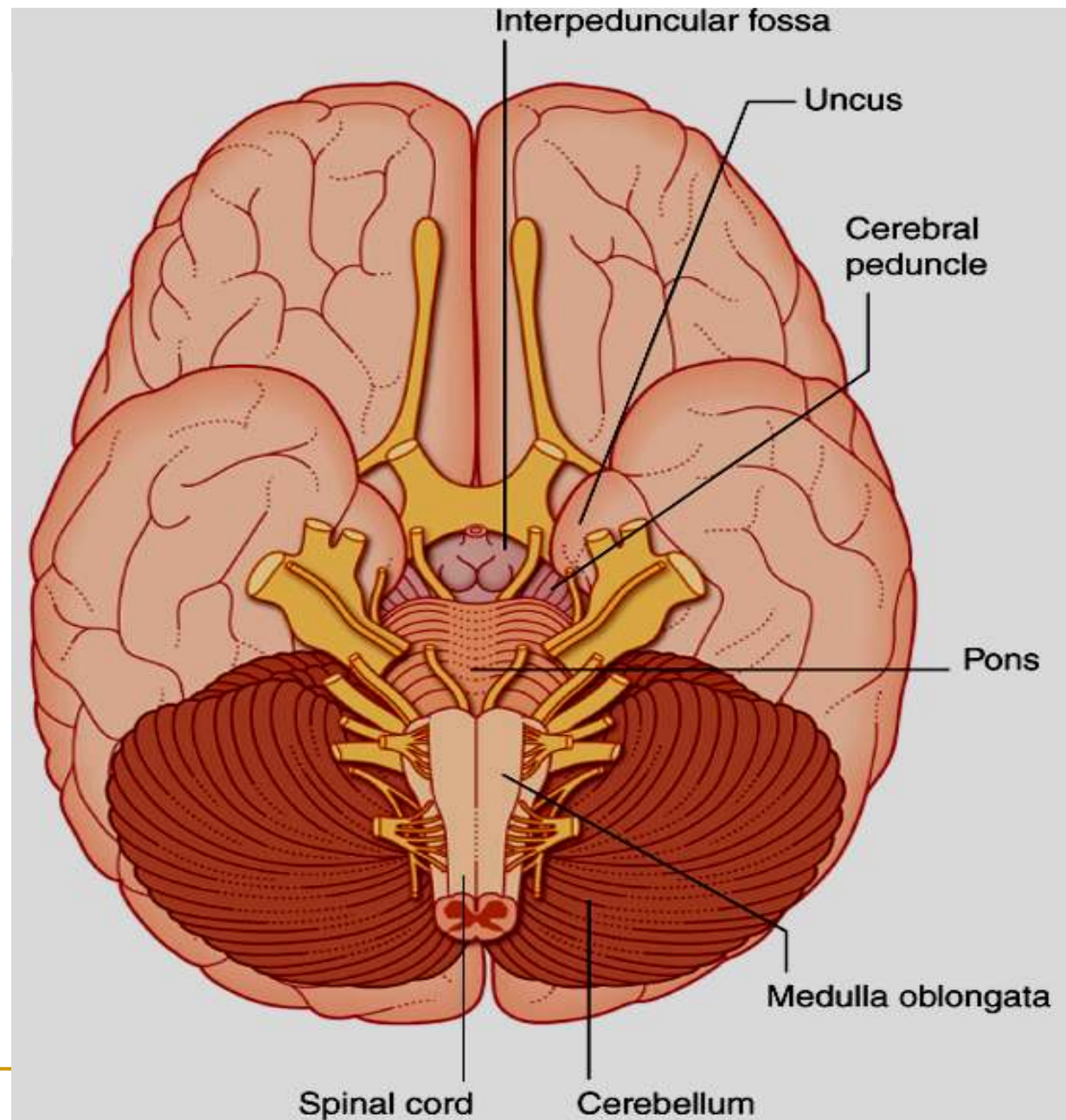
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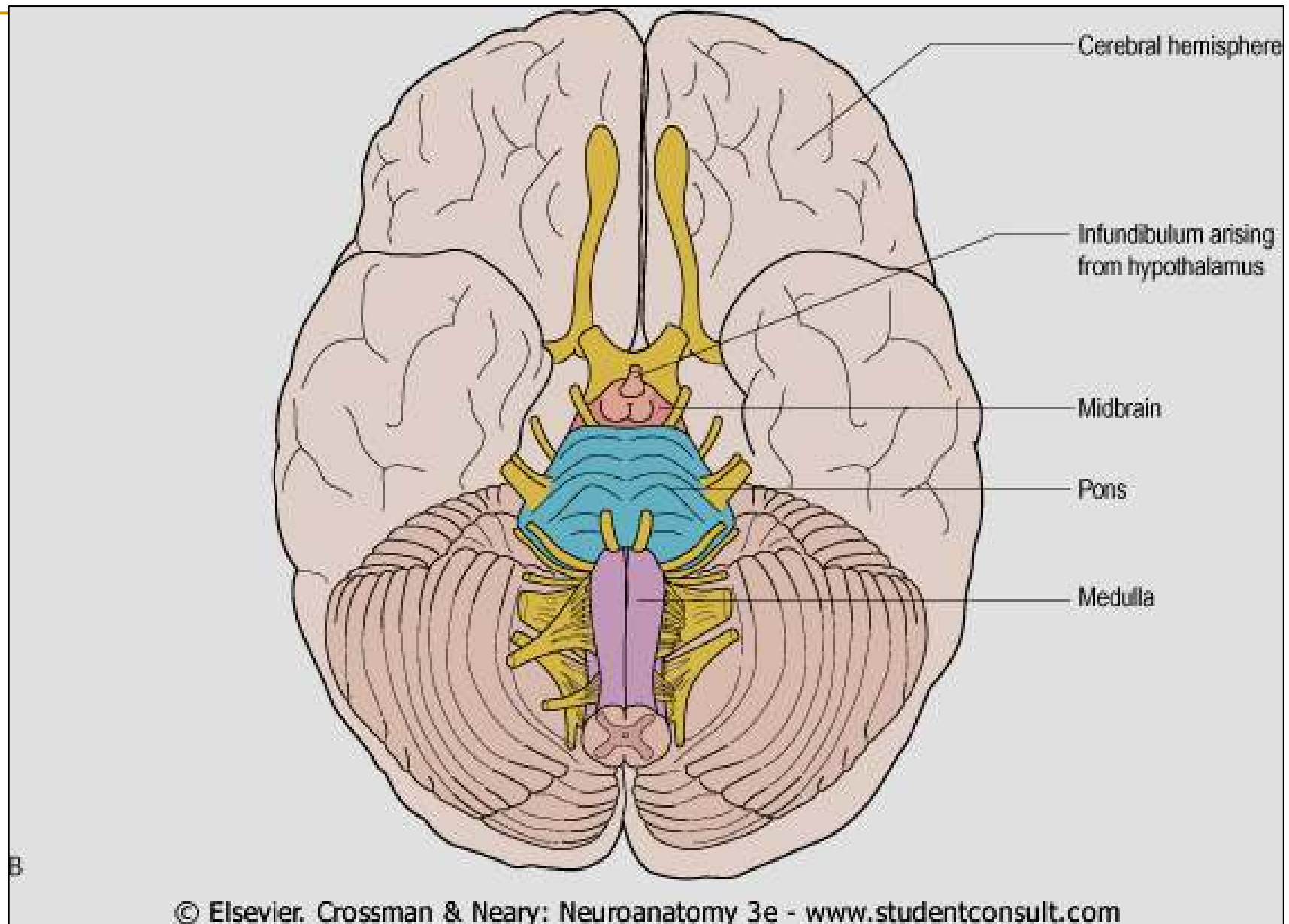
Dr. Noura El Tahawy

drnosman@yahoo.com

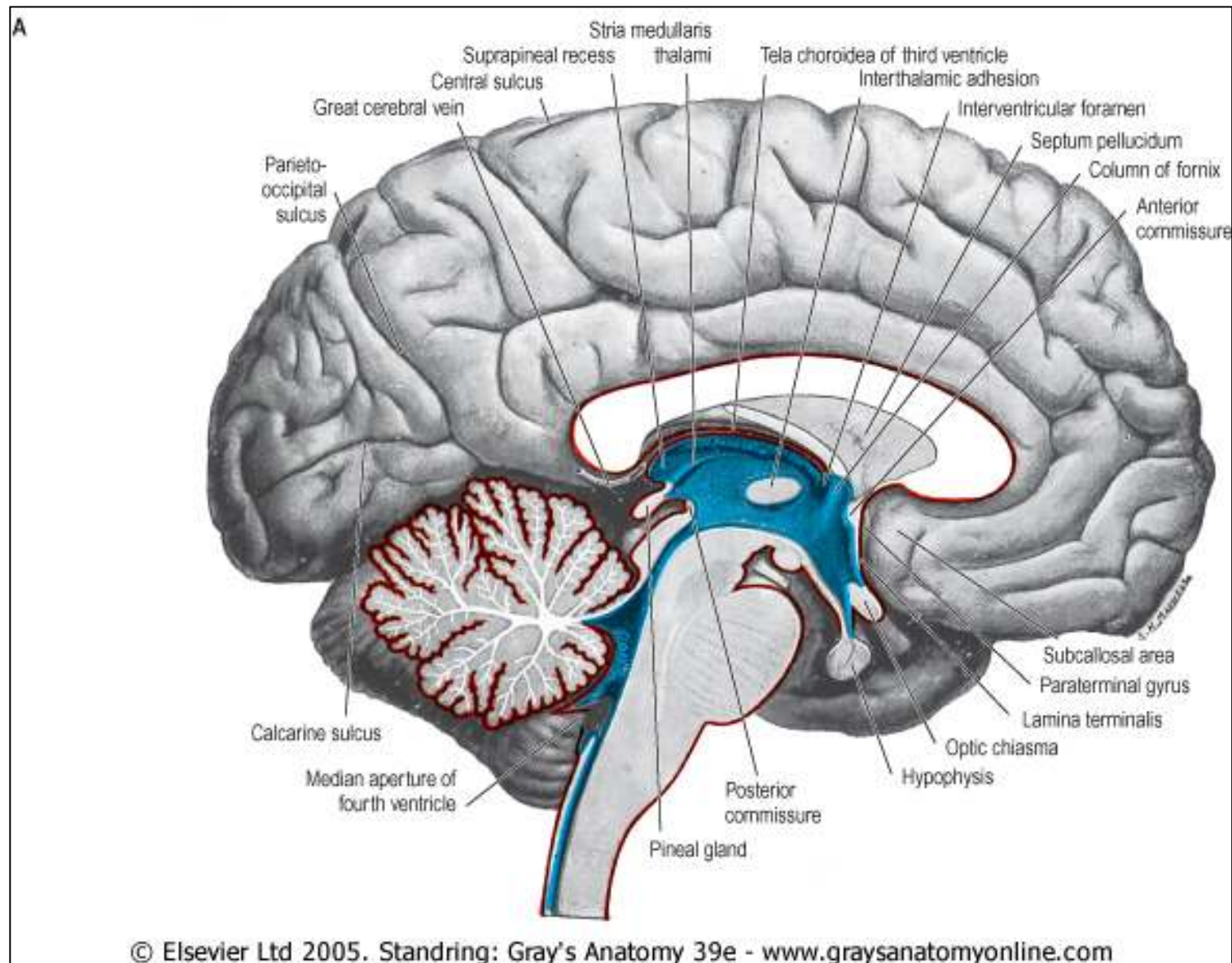
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**Ventral view of
the brainstem in
situ.**



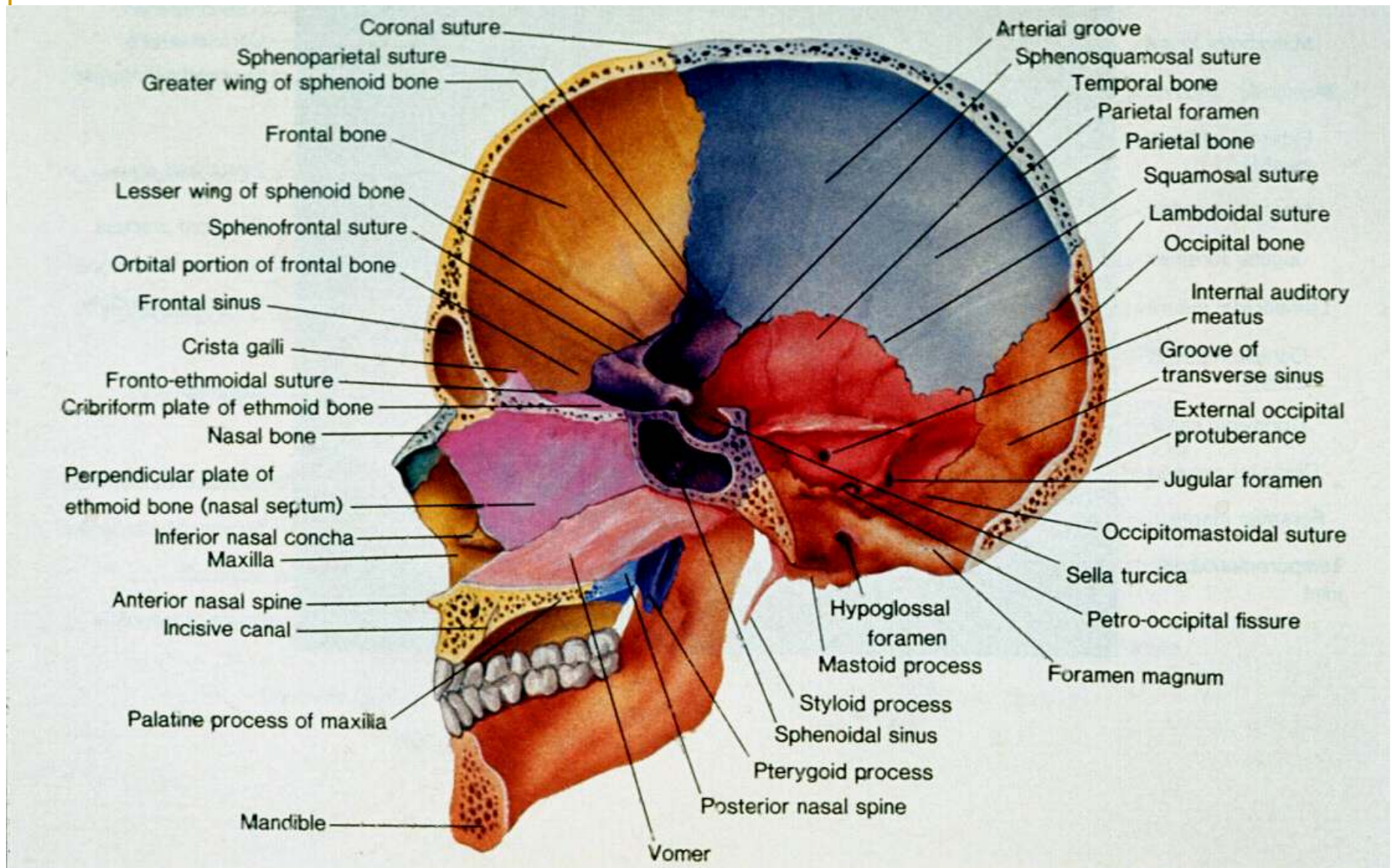


Principal subdivisions and some important landmarks in the mature brain.
(B) ventral aspect. Cranial nerves are indicated in yellow.

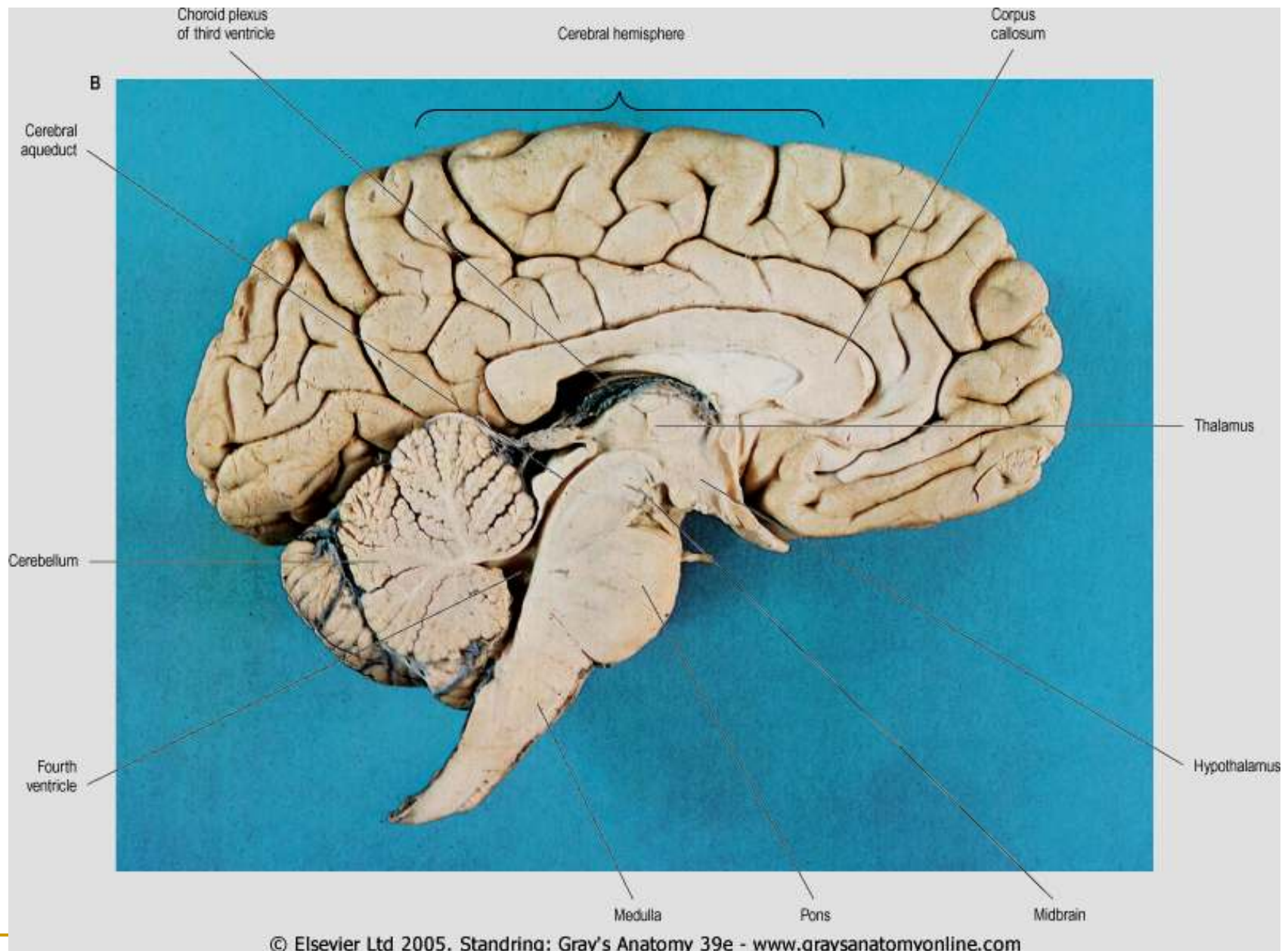


A, Sagittal hemisection of the brain to show the third and fourth ventricles. Pia mater: red; ependyma: blue. B, Sagittal hemisection through the brain.

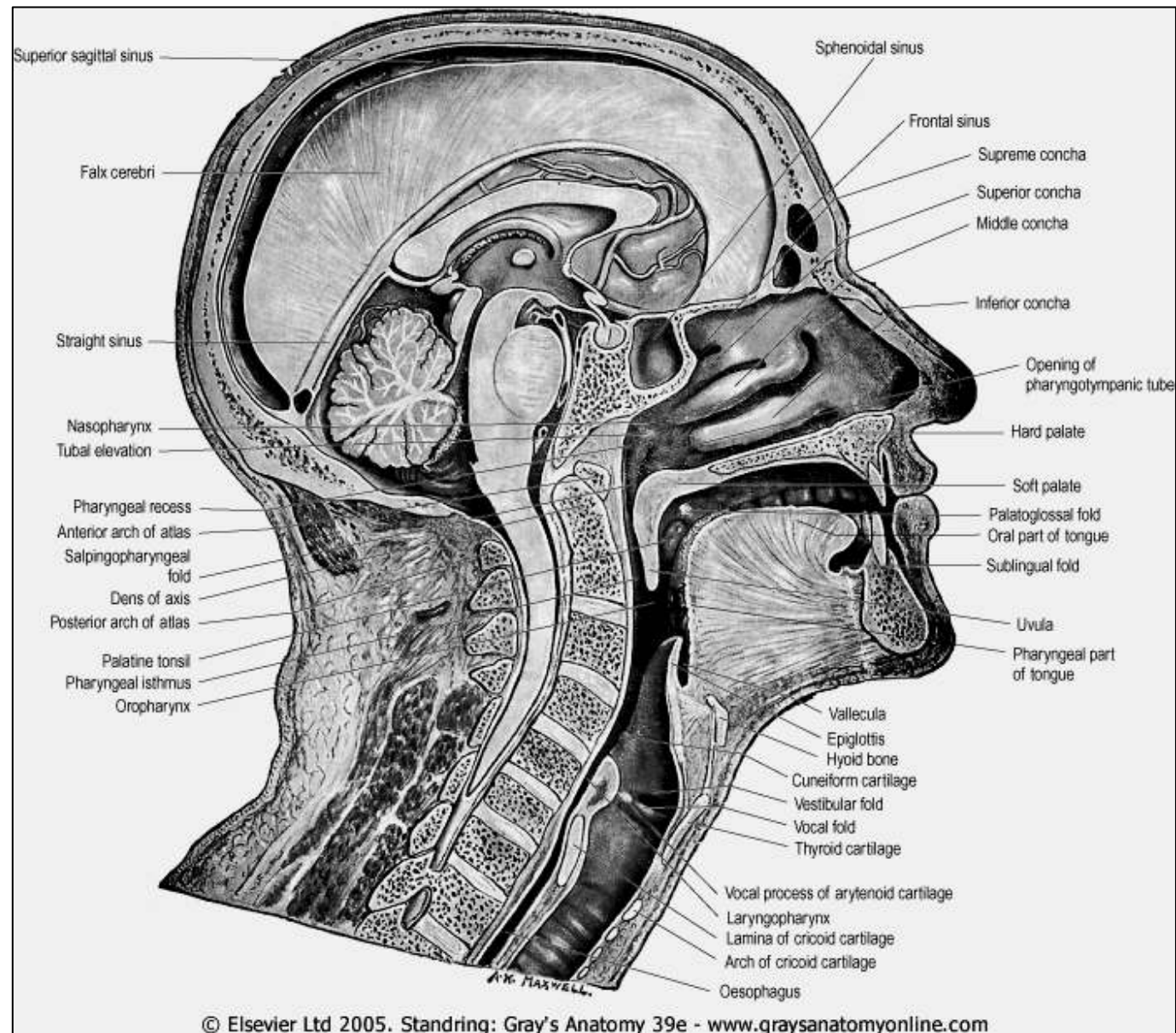
Position of pons



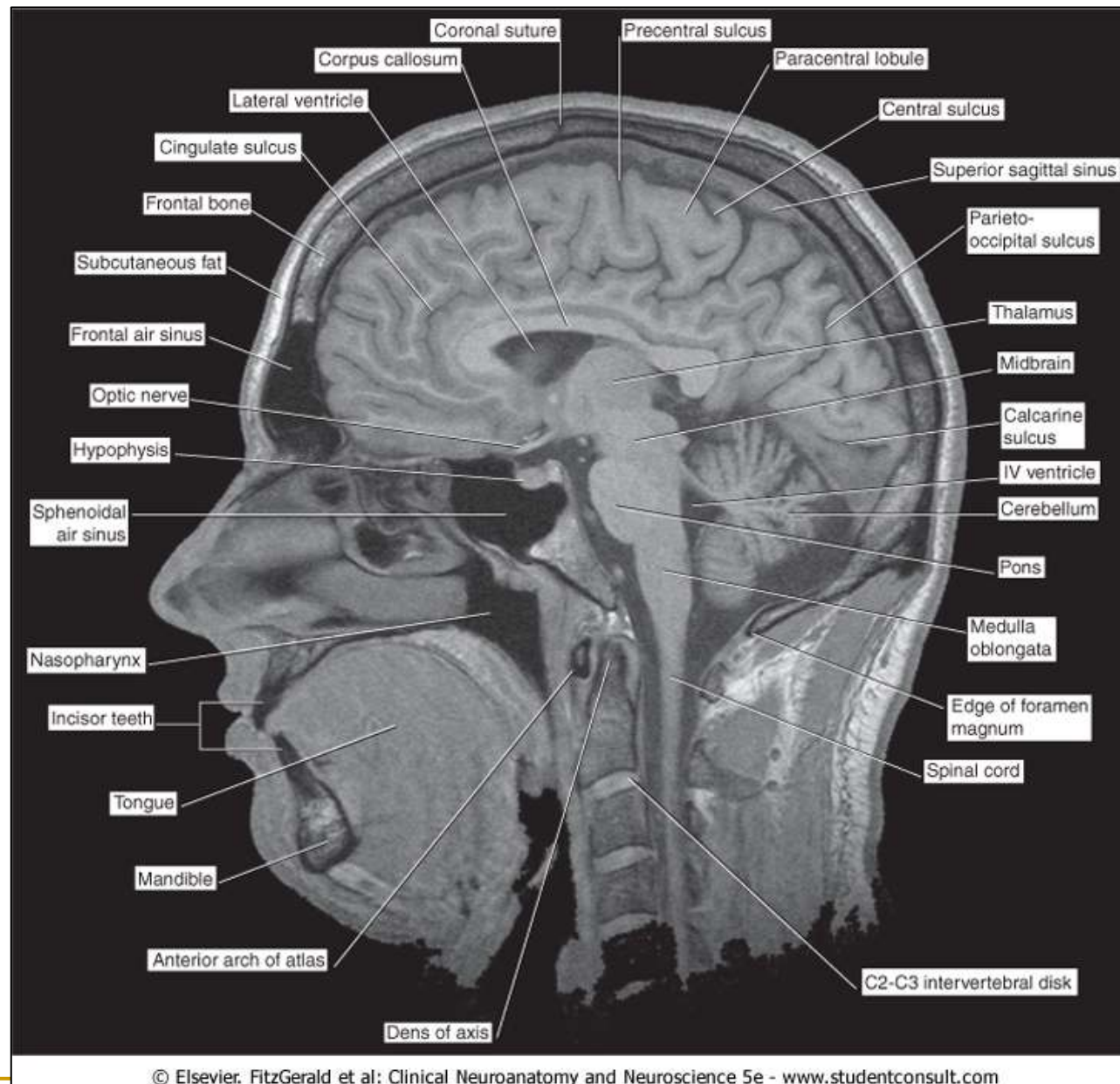
Midsagittal section of the skull



Sagittal hemisection of the brain



Median sagittal section through the head and neck.

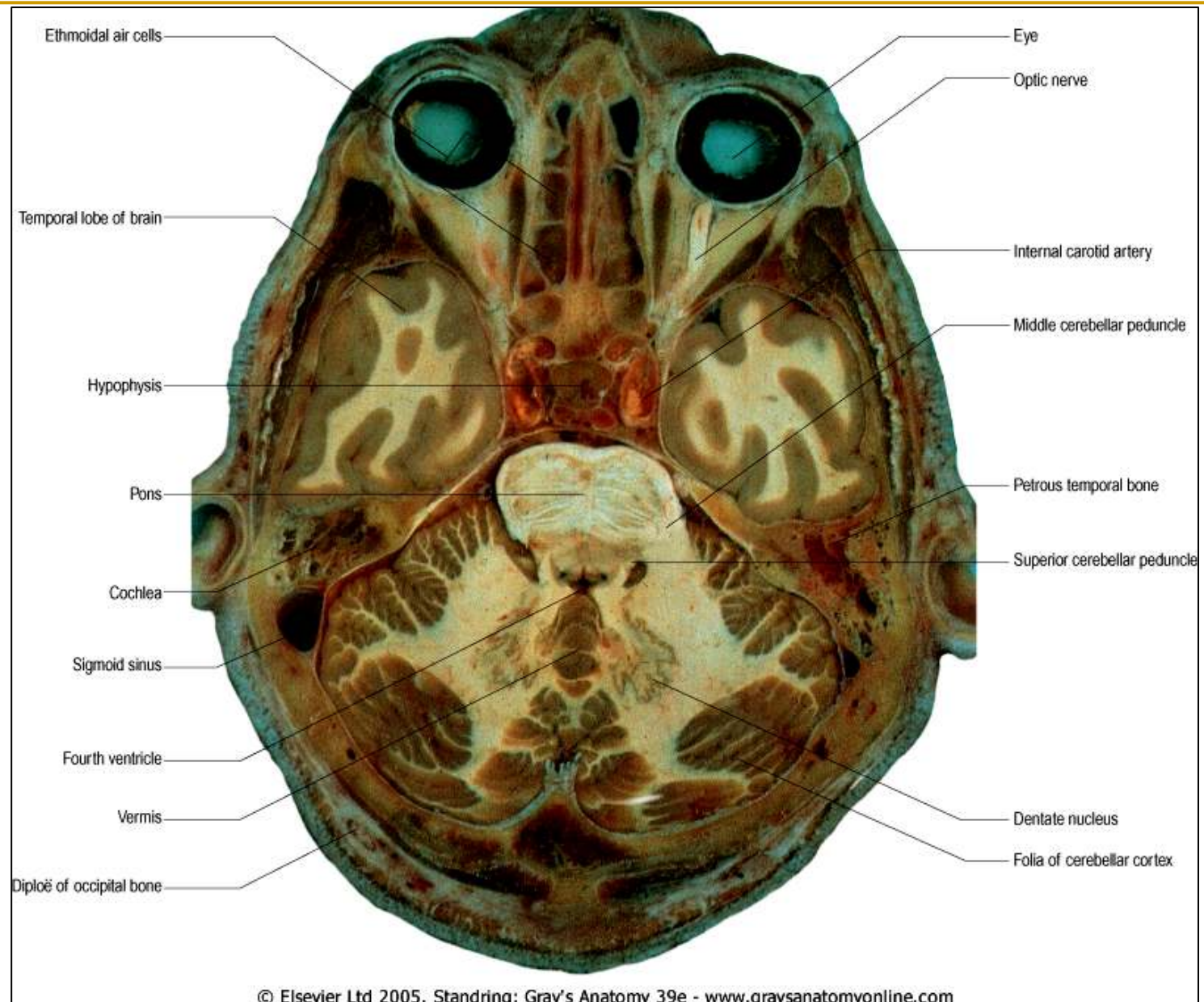


Sagittal MRI 'slice' of the living brain.



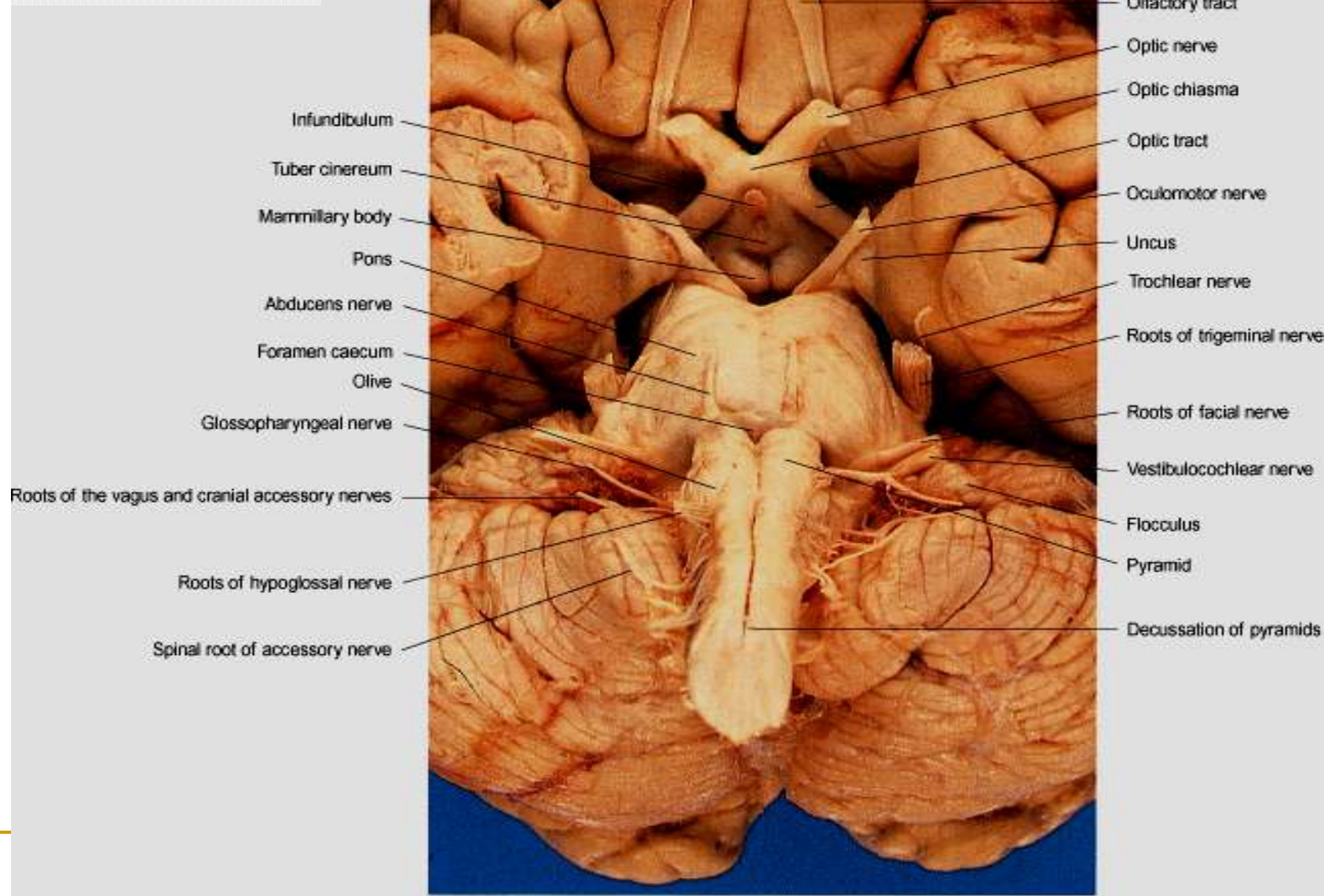
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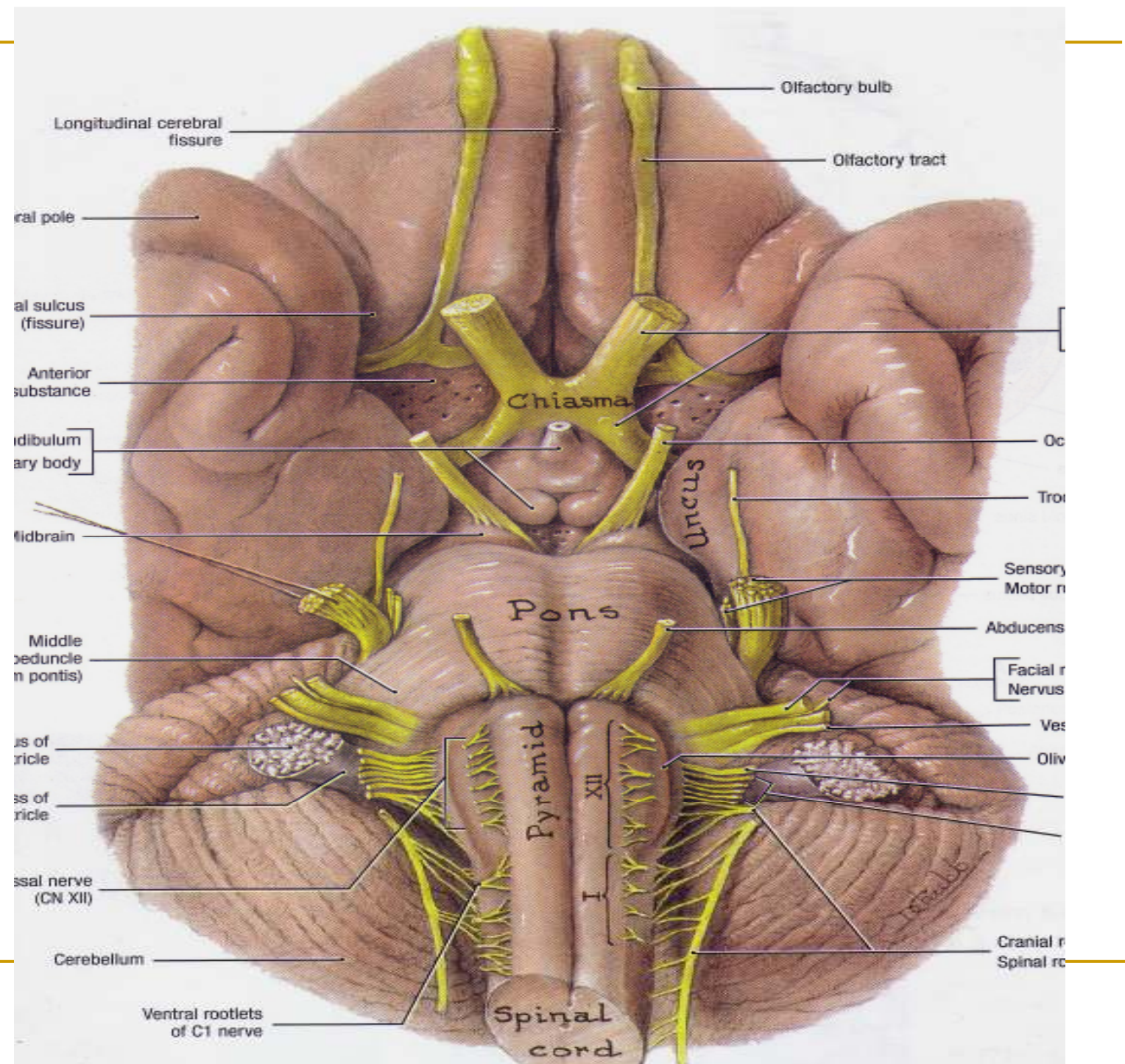
MRI scan of head in sagittal plane.



Horizontal section through the cerebellum and brain stem.

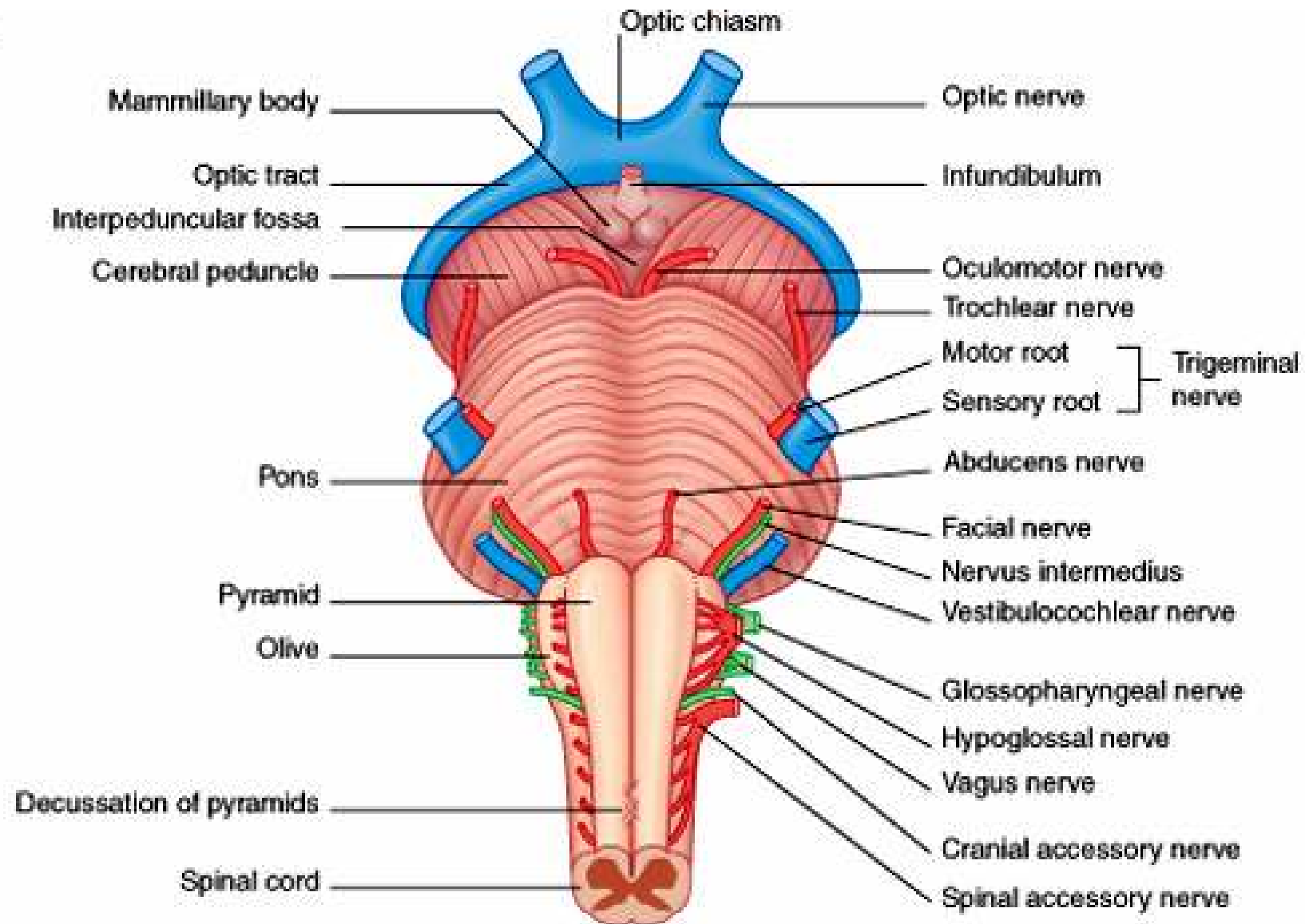
Ventral aspect of the brain stem.

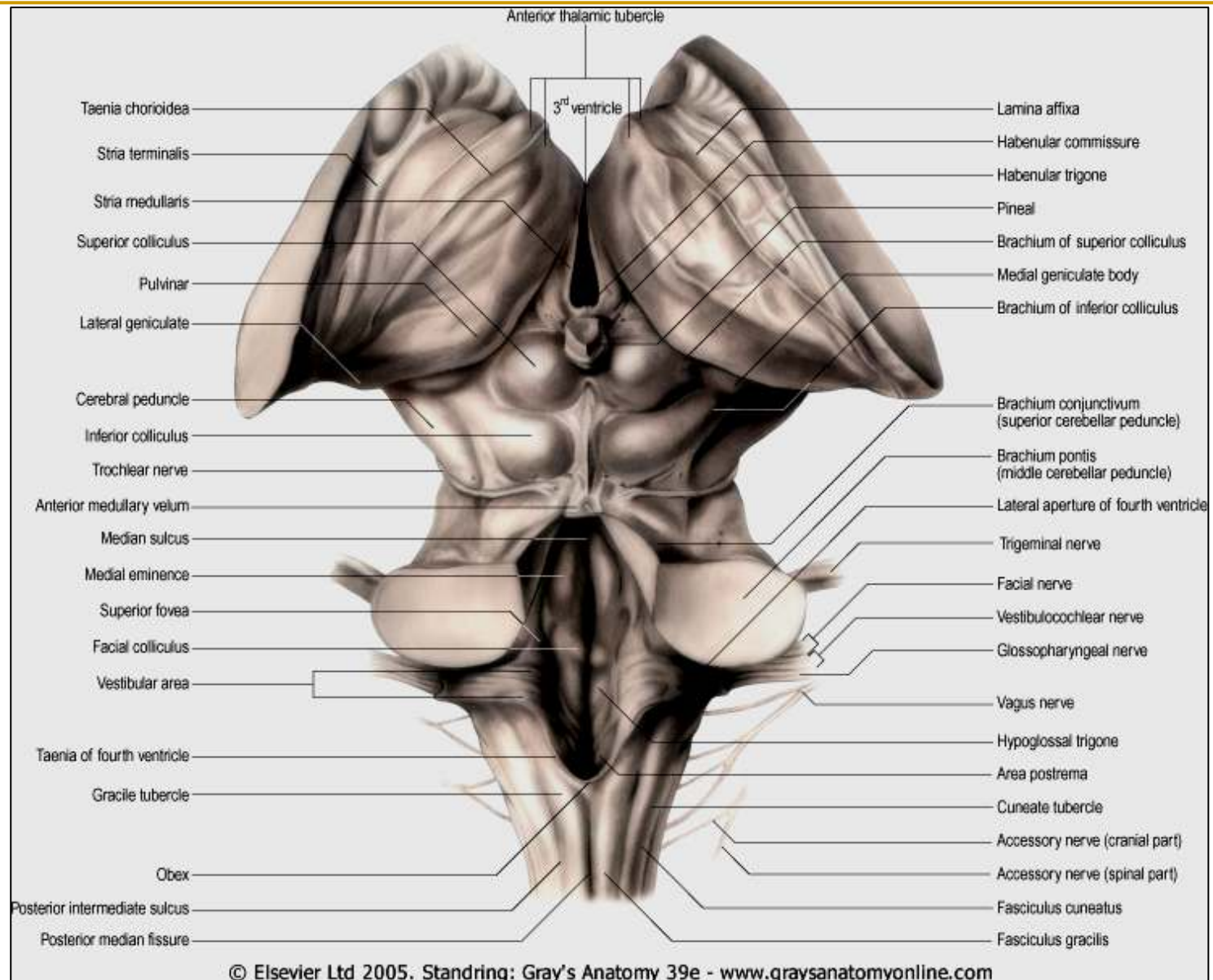




(A) Anterior view of the brainstem.

A

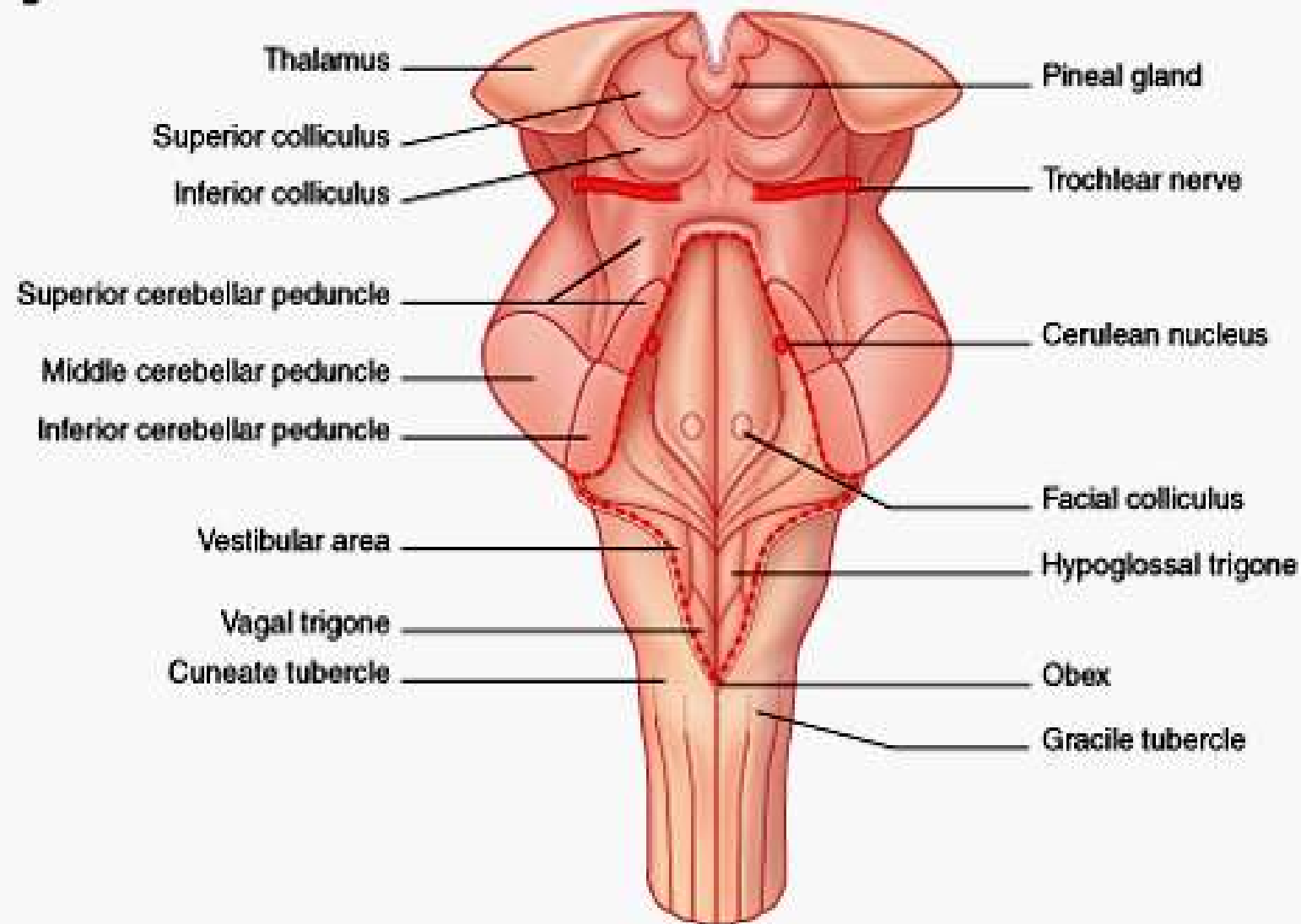




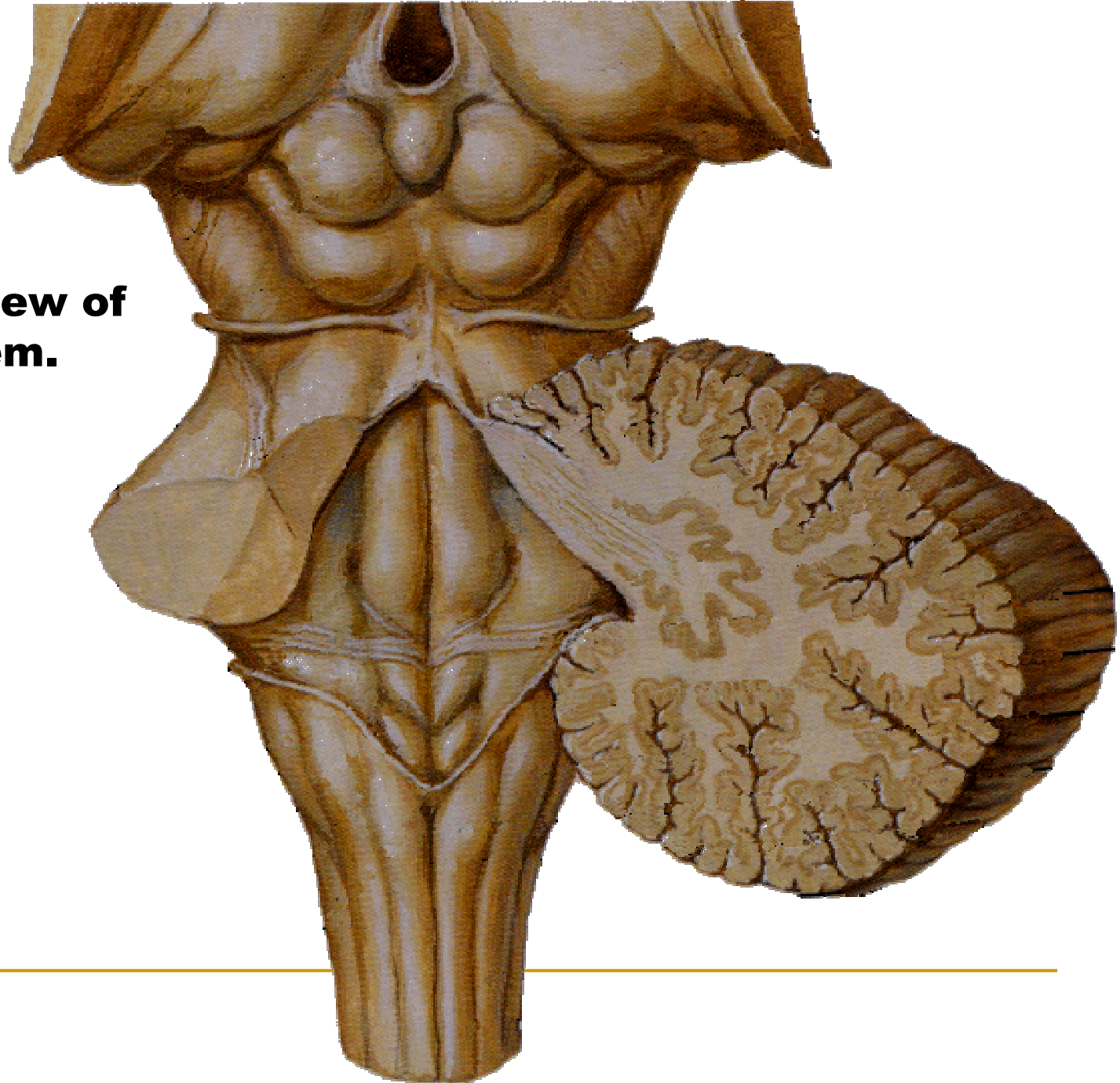
The dorsal aspect of the brain stem. The floor of the fourth ventricle has been exposed by cutting the cerebellar peduncles and removing the cerebellum.

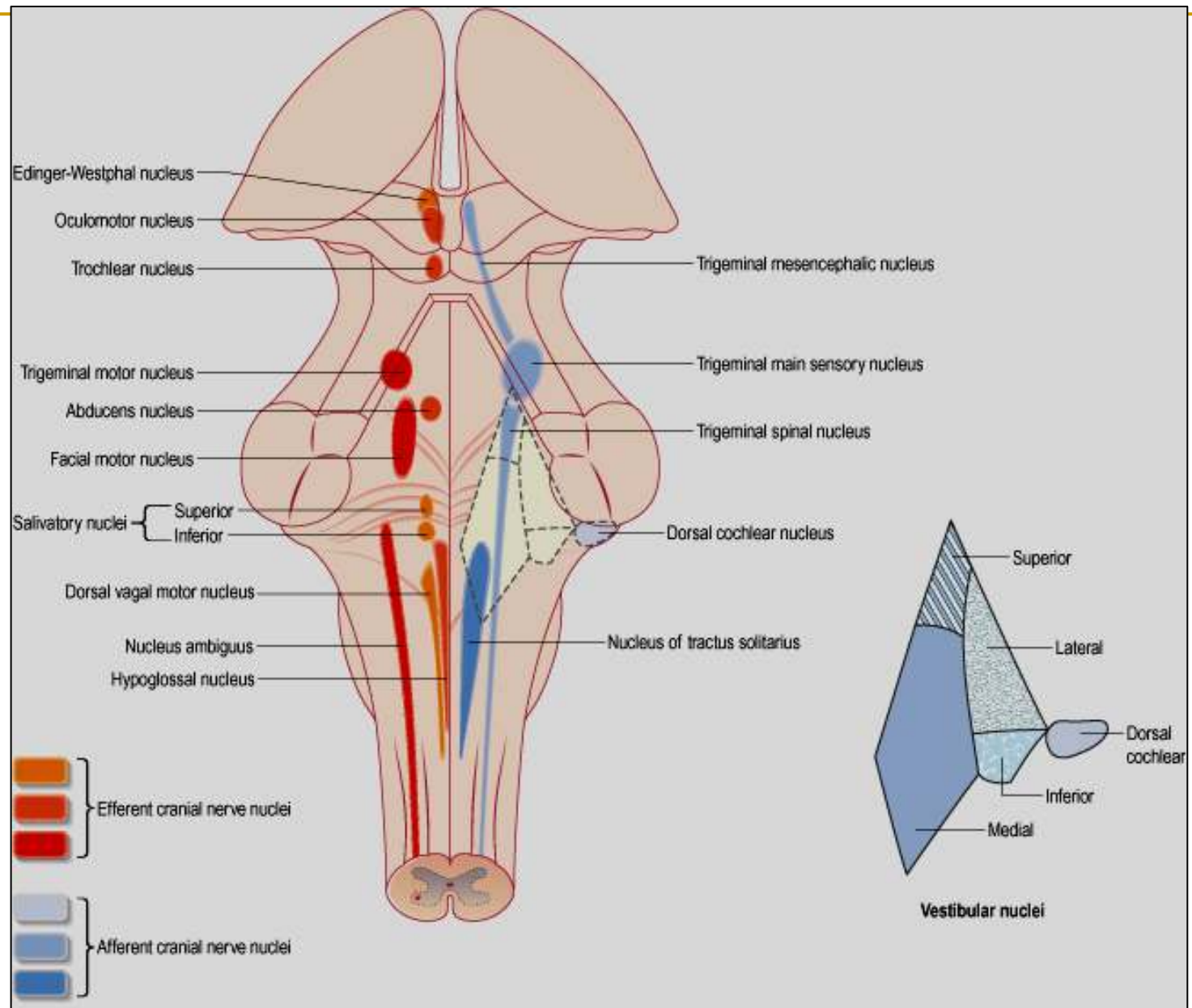
(B) Posterior view of the brainstem.

B

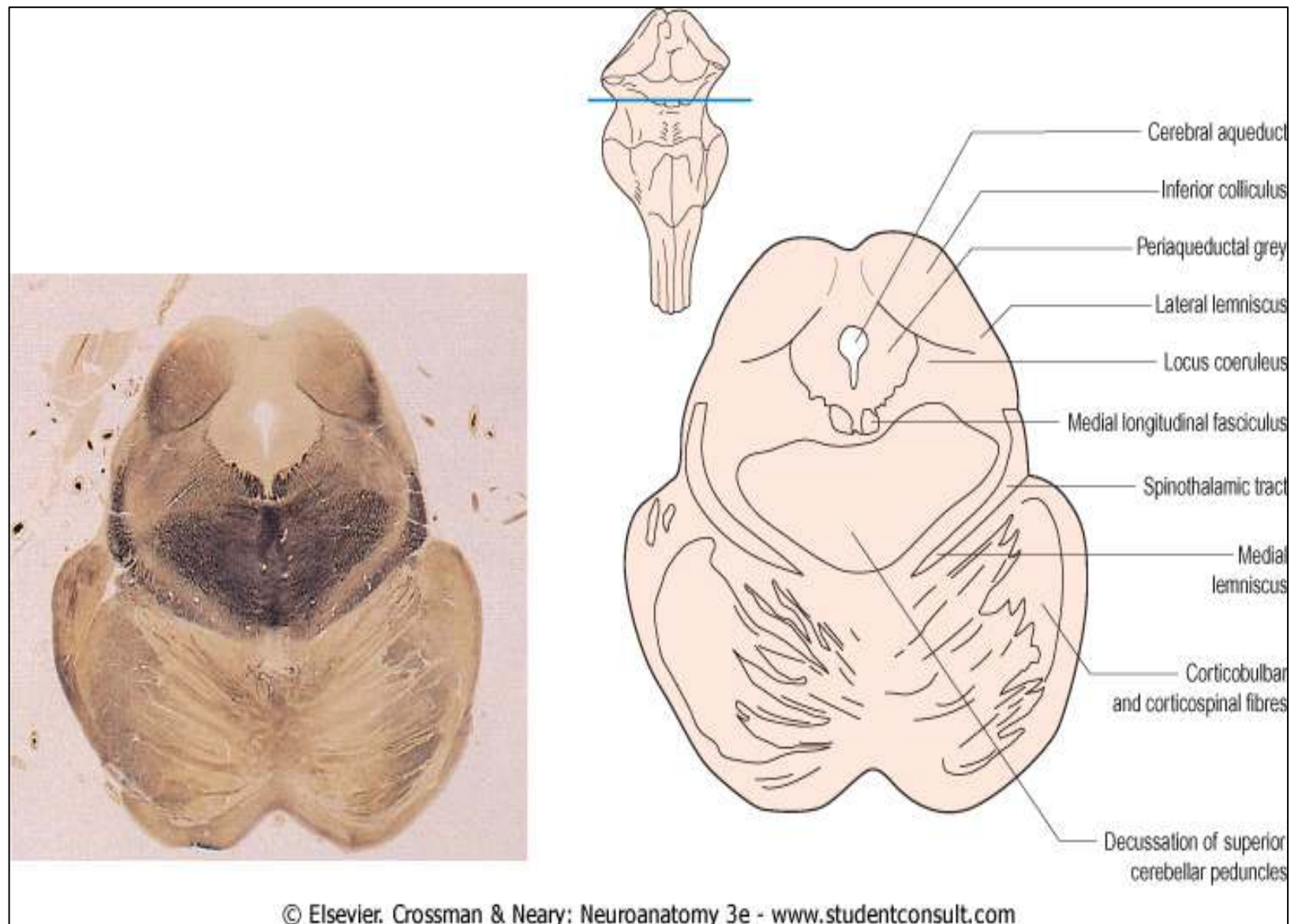


(B) Posterior view of the brainstem.

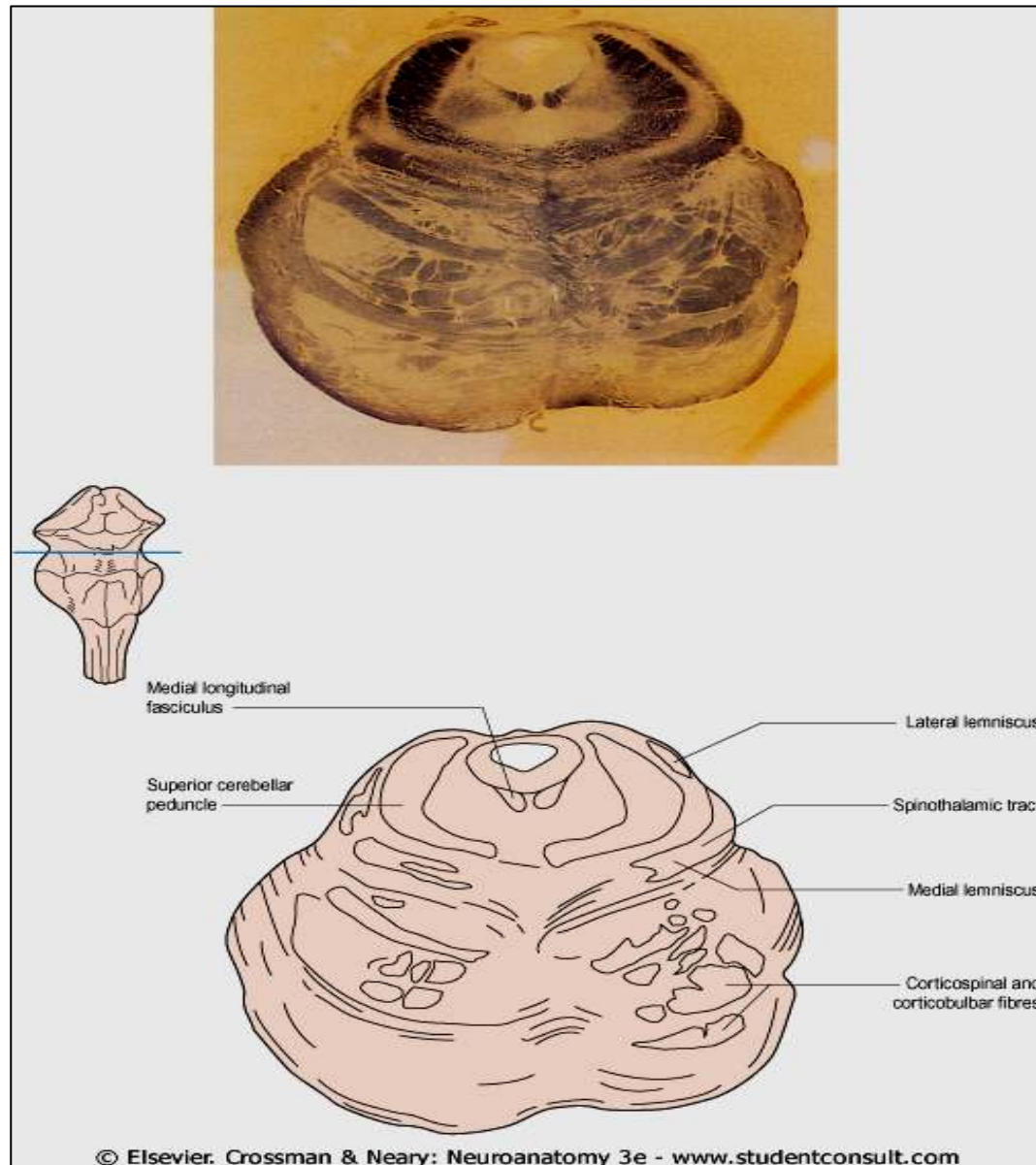




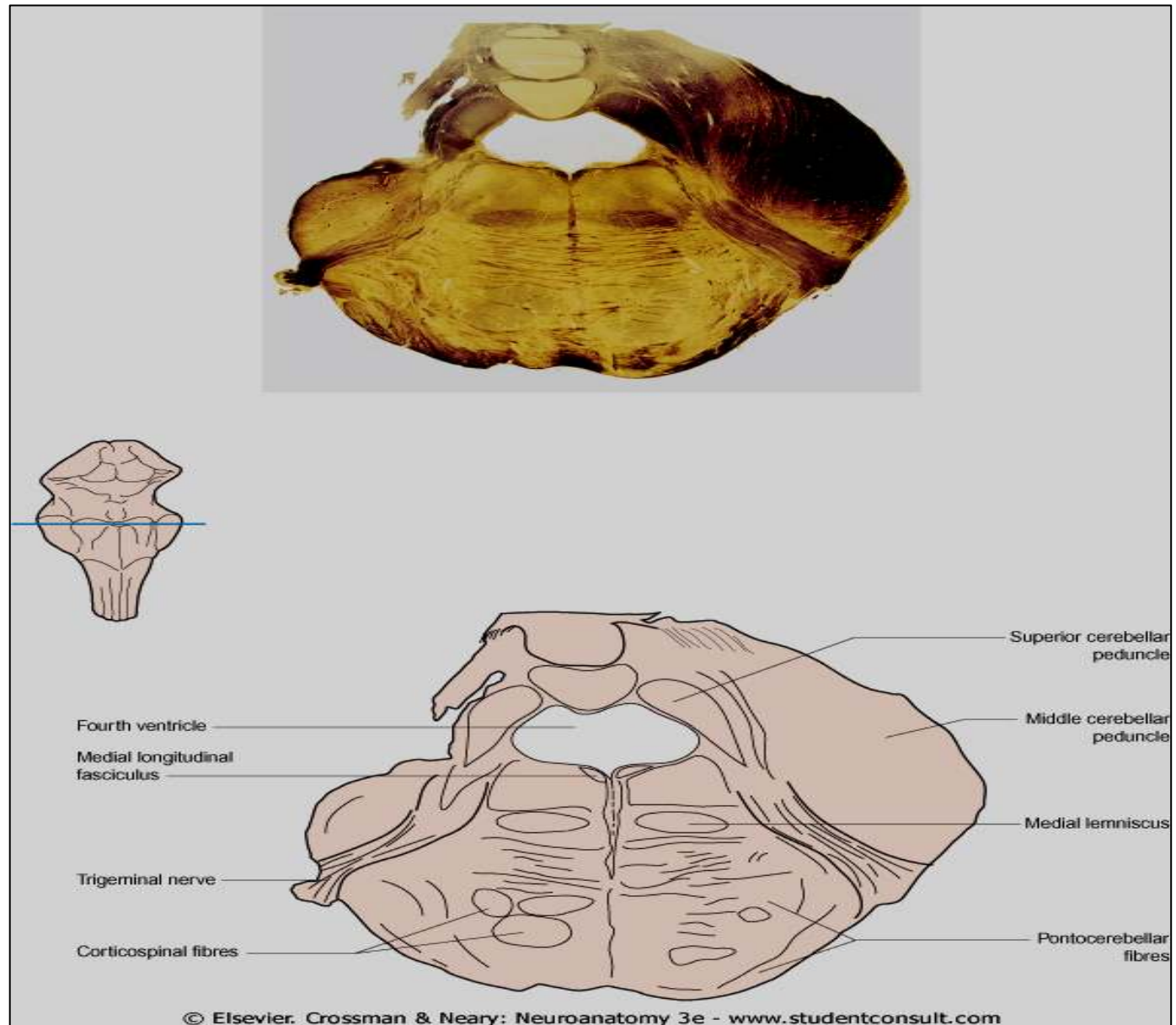
The cranial nerve nuclei.



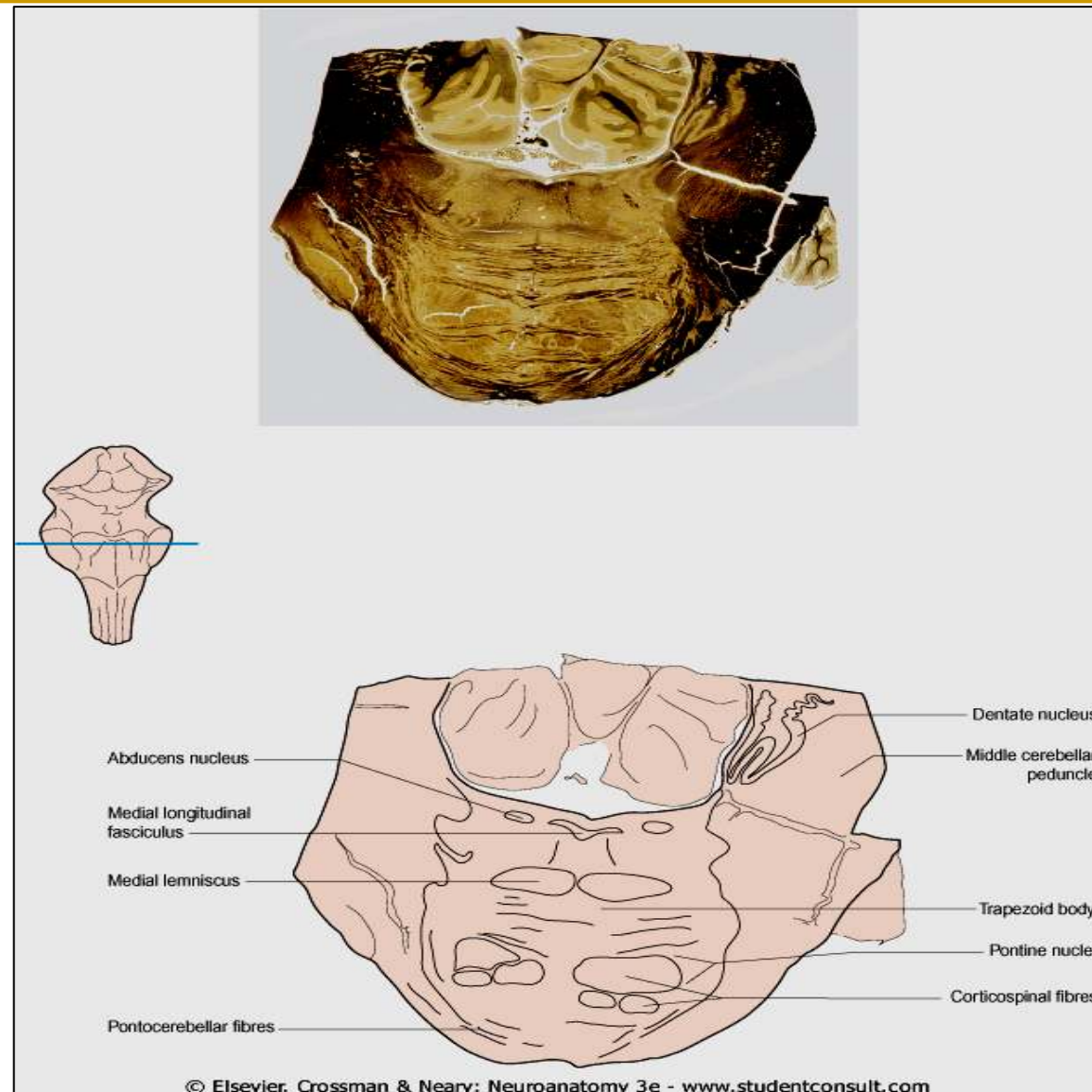
Transverse section through the brain stem at the level of the pontine-mesencephalic junction.



Transverse section through the rostral pons.



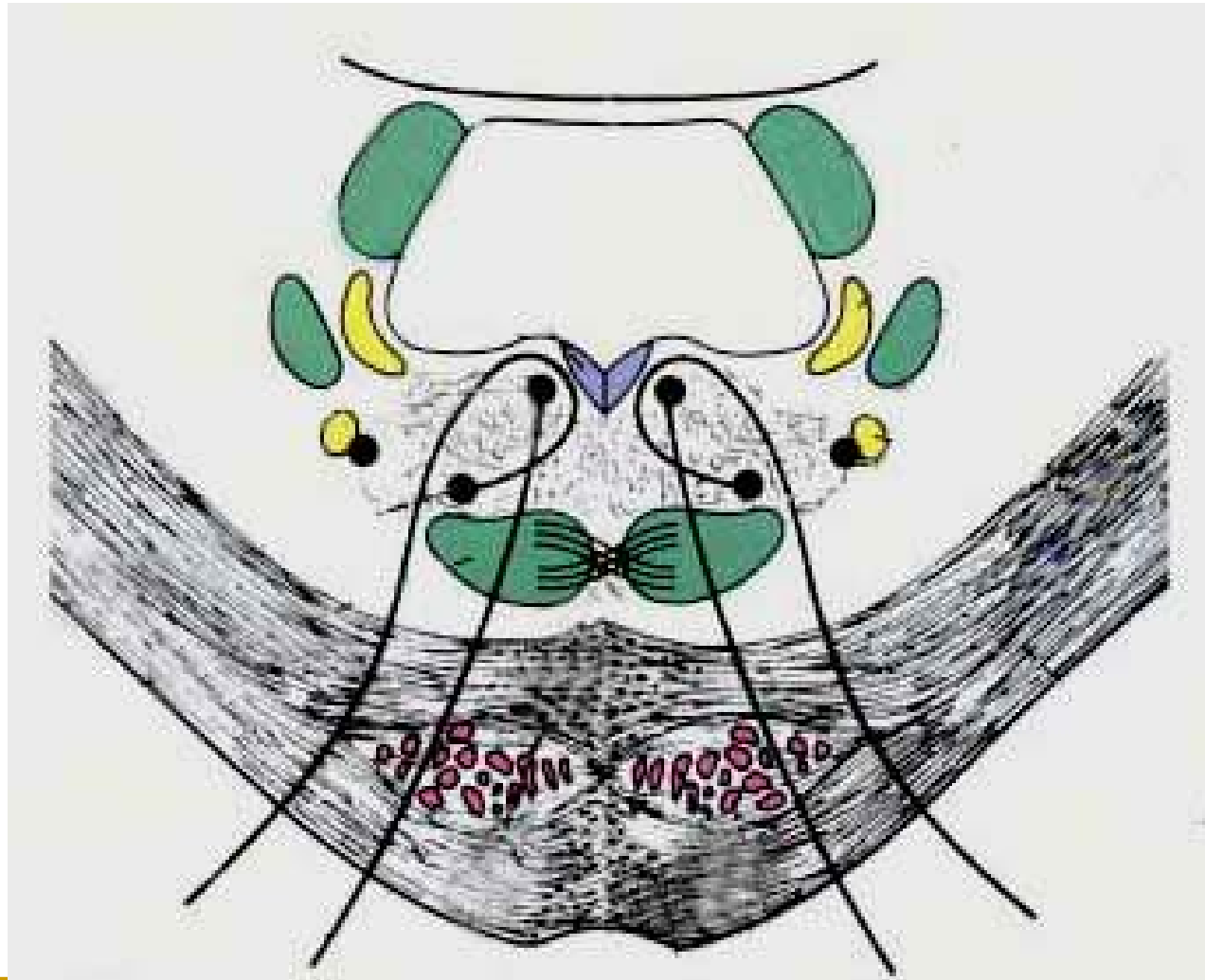
Transverse section through the mid-pons at the level of the trigeminal nerve.



Transverse section through the caudal pons.

Transverse section of the pons at level of facial colliculus (Caudal pons)

- **Tegmentum of pons** directed upward
continuation of medulla oblongata
- **Basilar part**
contain both longitudinal and transverse fibers
intermixed with pontine nuclei



Types of fibers in the basis pontis

- ***Longitudinal Descending***

- Corticospinal
- Corticobulbar
- Corticopontine

- ***Transverse fibers:***

- Pontocerebellar
 - Cerebellopontine
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Tegmentum (Dorsal part) of the pons

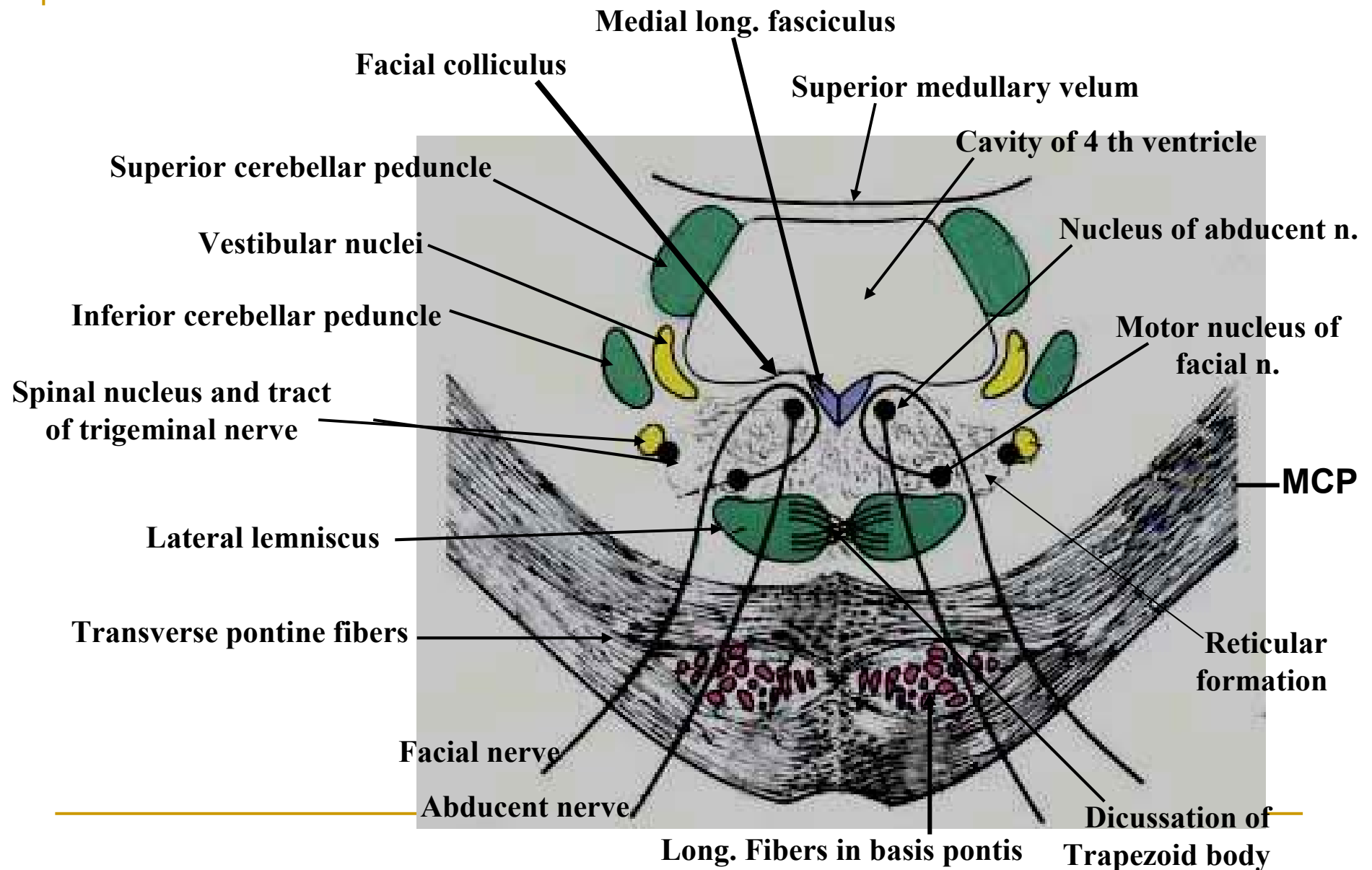
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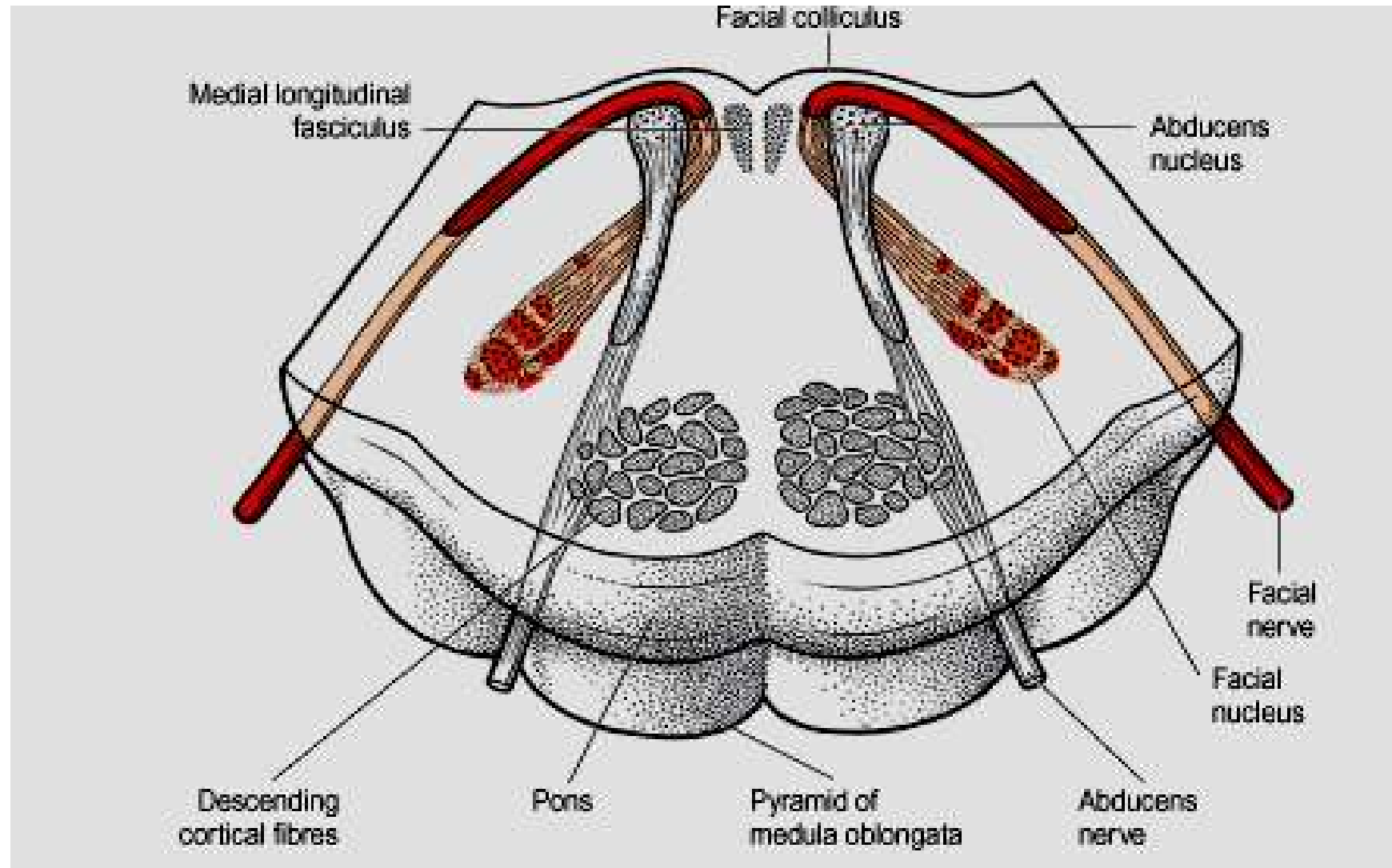
Ascending tracts

- **Medial lemniscus**
 - **Spinal lemniscus**
 - **Trigeminal lemniscus**
 - **Lateral lemniscus**
 - **Medial longitudinal bundle**
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Transverse section of the pons at the level of facial colliculus



Transverse section of the pons



The central course of the fibres of the facial nerve in a transverse section of the pons, viewed from the rostral aspect.

Cranial nerve nuclei in the Pons

Special visceral motor nuclei

Nucleus	Site	Cranial n.	Function
Motor nucleus of trigeminal n.	Pons	V	Masticatory muscles
Motor nucleus of facial n.	Pons	V	Facial muscles, platysma, posterior belly of digastric, stylohyoid, stapedius muscles

Cranial nerve nuclei in the Pons

General somatic motor nuclei

Nucleus	Site	Cranial n.	Function
Nucleus of abducent n.	Pons	VI	Lateral rectus

General visceral motor nuclei

Nucleus	Site	Cranial n.	Function
Superior salivatory nucleus	Pons	VII	Submandibular, sublingual and lacrimal glands

Cranial nerve nuclei in the Pons

General somatic sensory nuclei

Nucleus	Site	Cranial n.	Function
Mesencephalic nucleus of trigeminal n.	Midbrain (in rostral Pons)	V	Proprioception of head
Main sensory nucleus of trigeminal	Pons	V	Tactile sensation of head
Spinal nucleus of trigeminal	Medulla (in caudal Pons)	V	Pain & Temperature of head

Cranial nerve nuclei in the Pons

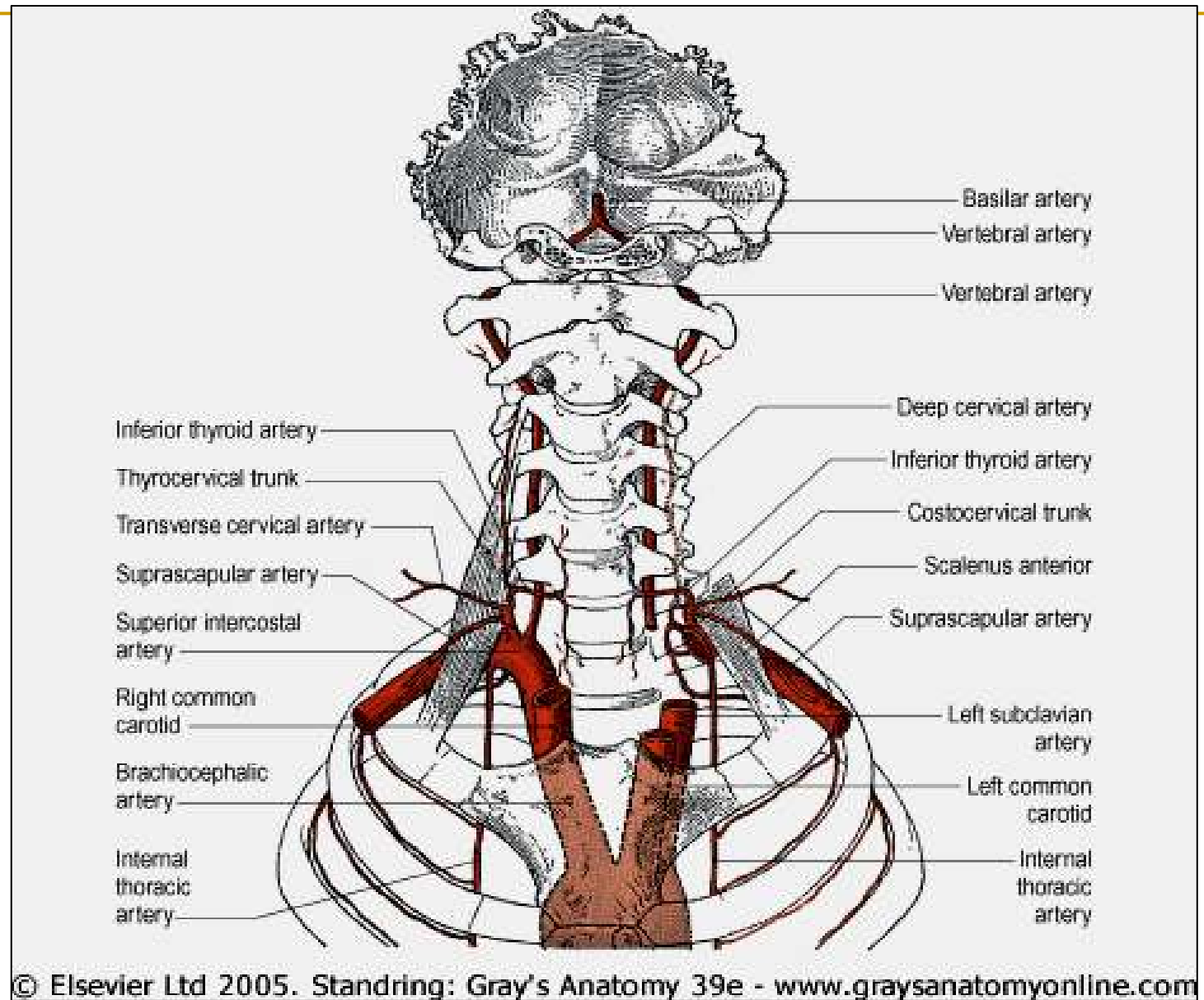
Special somatic sensory nuclei

Nucleus	Site	Cranial n.	Function
Cochlear nuclei (dorsal & ventral)	Pons and medulla	VIII	Sense of hearing
Vestibular nuclei (Superior, medial, lateral, inferior)	Pons and medulla	VIII	Sense of equilibrium

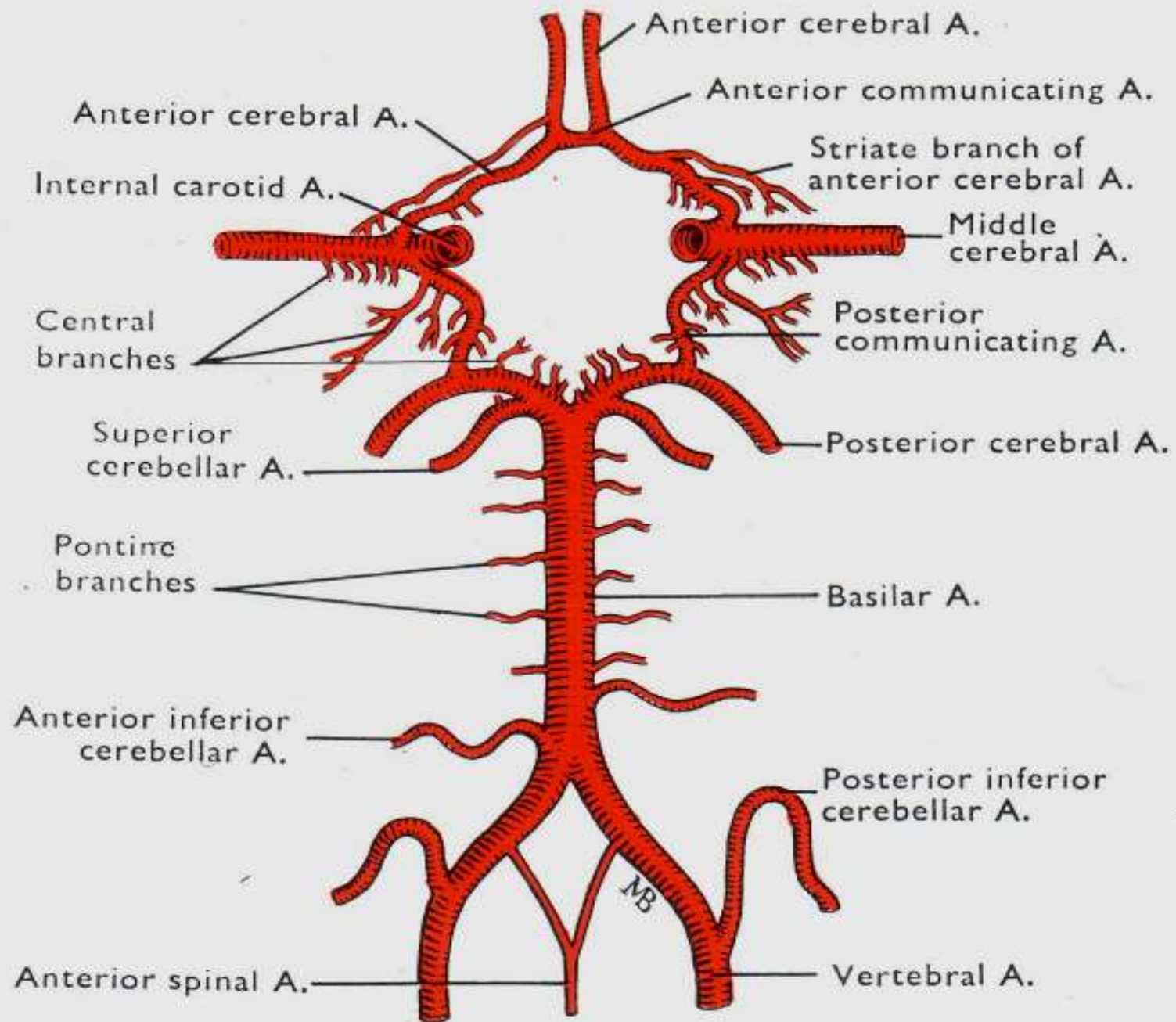
Non-cranial nerve nuclei in pons

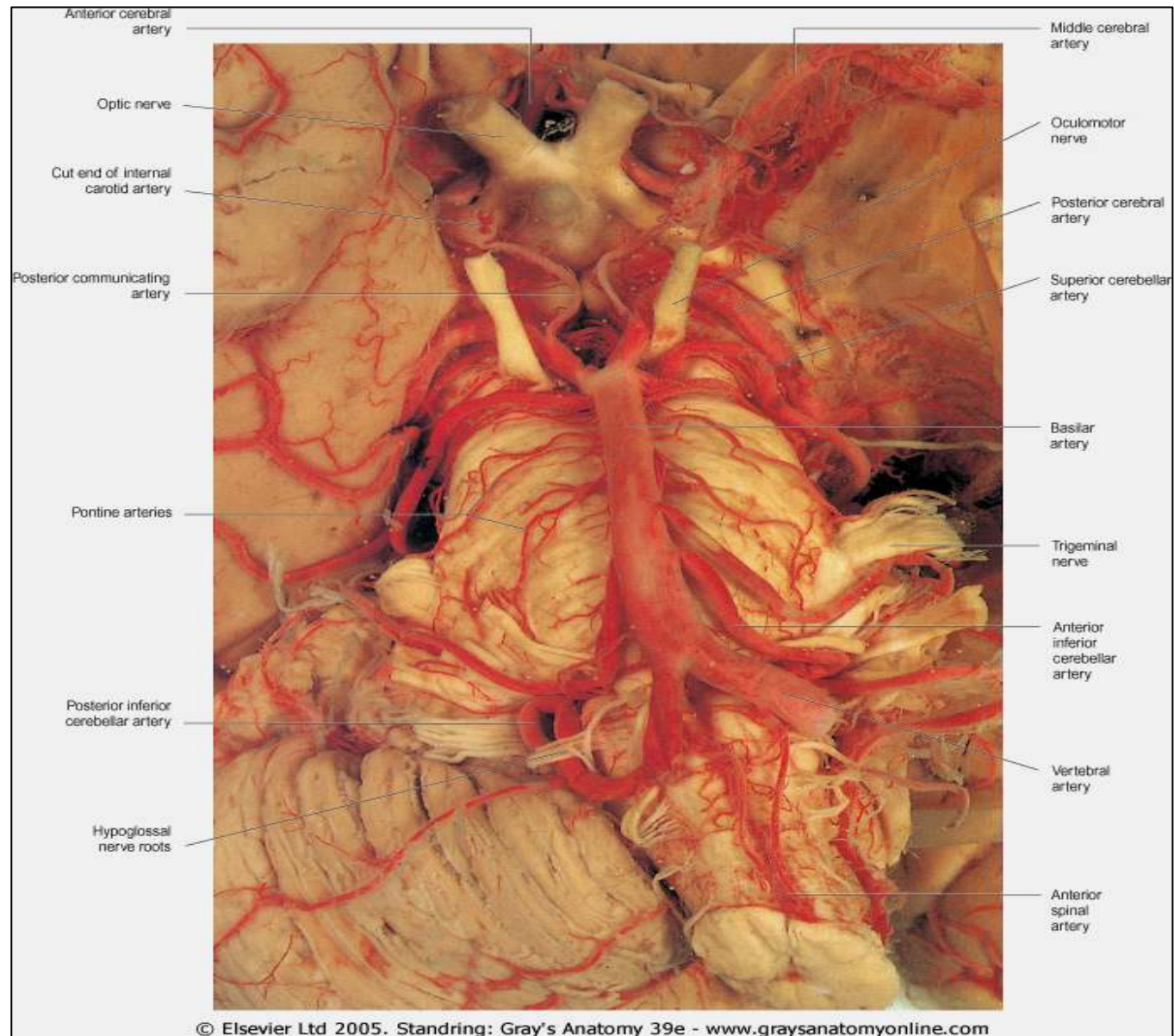
Nucleus	Site
Superior olivary nucleus	Tegmentum of Pons
Pontine nuclei	Basilar pons

Blood Supply of the Pons



The subclavian arteries and their branches.

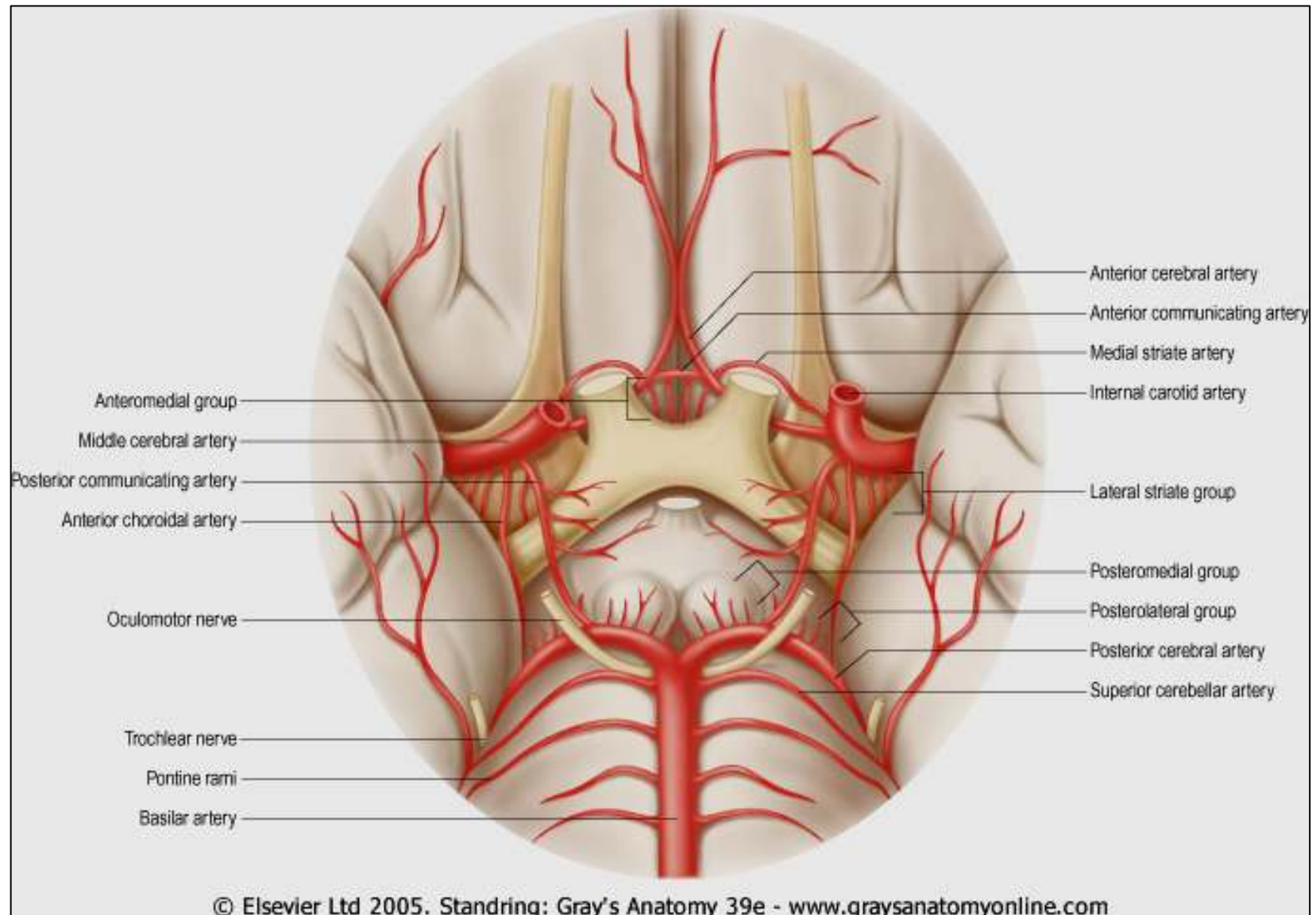




Arteries on the base of the brain injected with resin.

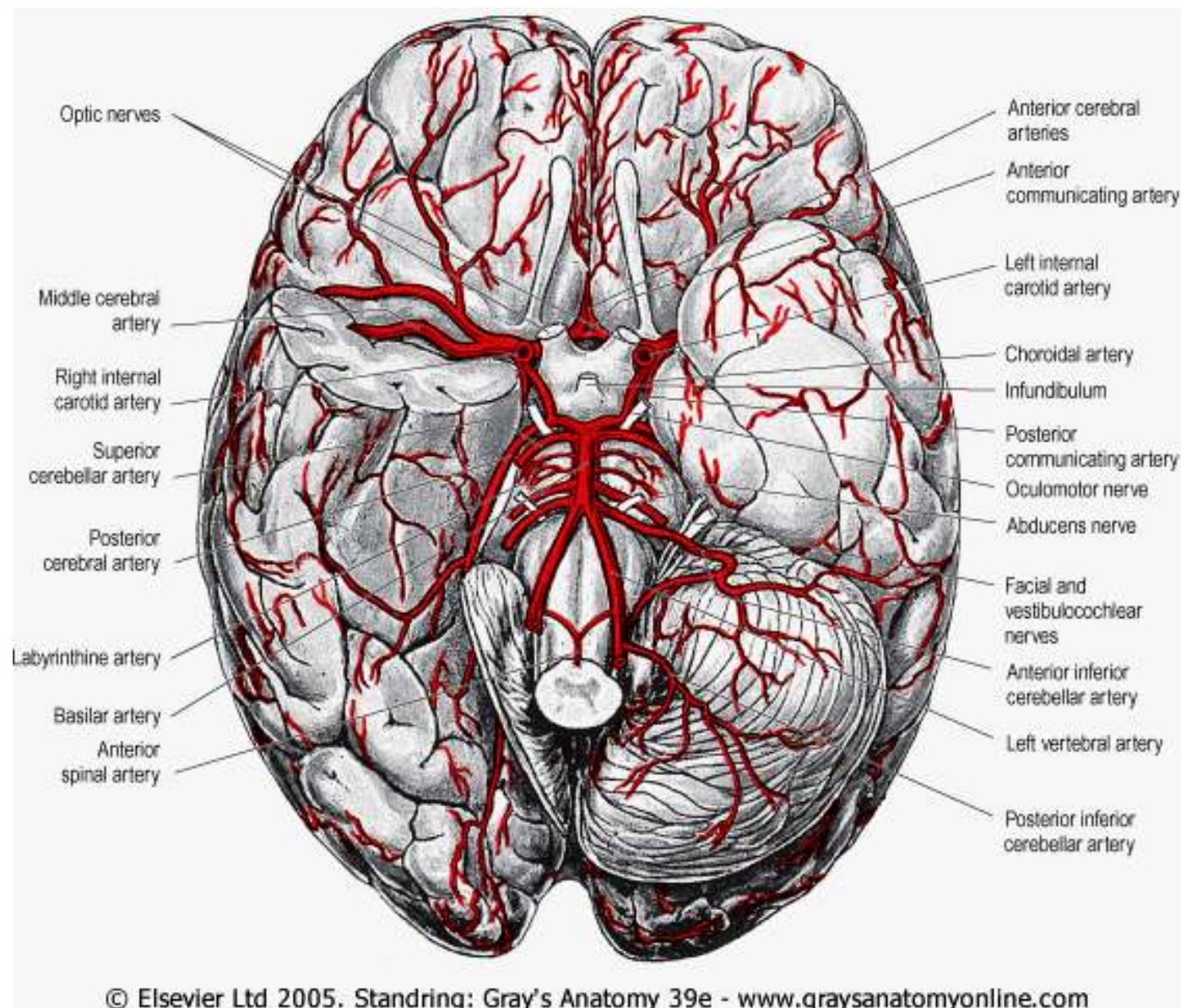
Vertebro-basilar system

- The two **vertebral arteries** arise from the subclavian arteries and ascend the neck in the foramina transversaria of the upper six cervical vertebrae. They enter the skull through the foramen magnum and unite at the lower border of the pons to form the **basilar artery**. The basilar artery ascends to the upper border of the pons and divides into two posterior cerebral arteries
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The circulus arteriosus on the base of the brain

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- About a dozen **pontine arteries** (from basilar artery) supply the full thickness of the medial part of the pons
 - The **anterior inferior cerebellar** and **superior cerebellar arteries** (both arise from basilar artery) supply the side of the pons before giving branches to the cerebellum .
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The arteries on the base of the brain.

Thanks



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